Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

U. S. F. S. RECEIVED
LIBRARY
MAY 23 940

United States Department of the Interior
Bureau of Biological Survey

Wildlife Leaflet BS-159

Washington, D. C. * April 1940

THE CHUKAR AND HUNGARIAN PARTRIDGES IN AMERICA 1/

By Clarence Cottam, Arnold L. Nelson, and Lawrence W. Saylor, Biologists,
Section of Food Habits, Division of Wildlife Research

With the awakening of public interest in wildlife conservation there has been a growing demand for supplementary plantings of many species of game birds. In most parts of the United States where hunting has been poor, there has developed a feeling that perhaps an exotic species might better supply the public need. Next to the pheasant, which has become naturalized and has done exceptionally well in some agricultural areas, the Hungarian and chukar partridges have become the most popular of the nonnative species, at least among sportsmen. The popularity of the three important exotics was evidenced by a recent questionnaire (1939) to game breeders, which disclosed that 544 handle ring-necked pheasants; 267, chukars; and 64, Hungarian partridges.

Many clubs, private individuals, and State officials have expressed a desire to introduce one or another of these birds into their section of the country. To supply up-to-date information on the status of these partridges and to prevent loss of time, effort, and finances, a survey was undertaken. To show the need for some basic information before making liberations, it may be mentioned that considerably more than a million dollars have already been spent in the introduction of the Hungarian partridge alone. Although some of the plantings have been successful, many more have ended in failure. Unless liberations are made in suitable habitat, complete loss is inevitable.

Too many persons have made the common error of believing that distant pastures are greener than those at home--that foreign birds are better than native species. We believe that, as a general rule, returns will be more satisfactory if sportsmen and conservation agencies give more consideration to the improvement of the environment of native game than if they seek a solution by indiscriminate liberation of artifically propagated foreign species. There are, of course, exceptional circumstances,

---

1/ Presented at the technical session of the Fifth North American Wildlife Conference, Washington, D. C., March 20, 1940.

and efforts should be made to establish the most desirable game, whether native or exotic, in unoccupied areas. To prevent loss and to maintain the maximum productivity of any area, liberations should first be made on an experimental basis and under the most competent direction.

We are indebted to the various State conservation departments for the major part of the information contained in this report. Supplementary data were obtained from members of the Bureau of Biological Survey and from its cooperators, and from both published and unpublished reports.

Chukar Partridge

The chukar partridge is native to inner Mongolia, Tibet, India, Arabia, Egypt, Asia Minor, and southern Europe. The term "chukar" is commonly applied to only one of the four species of red-legged rock partridges of the genus Alectoris, this being the species A. graeca, which includes 22 subspecies. The bird imported into this country as the chukar is the Indian variety A. graeca chukar.

In 1893, W. O. Blaisdell of Illinois brought in 5 pairs of chukar partridges from Karachi, India, and from this stock a few birds were liberated at Macomb, Illinois the following spring. One of these was shot at least 8 miles from that place, but no further report of this liberation is available. In 1928, at San Francisco, Calif., Frank E. Booth introduced some chukars direct from India. Phillips, in his bulletin "Wild Birds Introduced or Transplanted in North America," says that "in some old correspondence of Henry Oldys with Gustav Walter, of New York, mention is made of some trials with chukars in both Massachusetts and Nova Scotia". Whether the last-mentioned introductions antedate Blaisdell's attempt in 1893 is not known. There have been unconfirmed reports that Georgia and Maryland have introduced some chukars from Egypt.

For the past 10 years, and especially during the past 3 years, interest in the liberation of chukars has been steadily increasing. A majority of the States have already made attempts to establish the species. Most of the liberations, however, are so recent that it seems unsafe to assume that the success of the birds is assured in any state. Table 1 shows what has been done to date in the introduction of this species, and lists the States in which at least some success has been attained. So far it appears that the birds are making better progress in establishing themselves west of the Mississippi River.

The superintendent of the State Game Farm in California reports that the chukar is taking especially to the more arid parts of that State and that it is doing exceptionally well. Other observers, however, are less optimistic about the results. Up to and including 1938 more than 9,500 of the birds had been released in California. Minnesota conservation officials have stocked 13,908 chukars to date, nearly 12,000 of which were liberated in 1939. The game officers report the 1938 and 1939 natural reproduction as being good. Wisconsin has planted at least 3,845 of these partridges, and though State officials decline as yet to declare the species an established success, they report that the birds have stayed more

or less in the localities where they were liberated, mainly in stubble fields and open country. Washington officials released 681 chukars in 1938, and they are much impressed with the success of reproduction and have hopes that the species will adapt itself to the arid parts of the State. Nebraska, up to the close of 1939 had liberated 4,000 chukars. The birds there appear to prefer low cover in the river valleys and are said to withstand deep snow very well. The State Warden of Wyoming reports that flocks of chukars released in that State in 1937 and 1938 are increasing, and that large coveys have been seen near the points where the "seed" birds were liberated. Biological Survey officials in Nevada say that the chukar seems to be fairly well established in at least 4 counties and that large flocks have been observed. The North Dakota Fish and Game Department wrote in 1938: "This species has done exceptionally well since it was liberated".

An important factor to consider in the introduction of any exotic species into a new habitat is possible competition with native species. It was expected that at least in some instances severe competition would occur between quail and chukars. All State game officials in reporting their experiences with the chukar, however, state that to the best of their knowledge no serious competition is evident. The territory occupied by the chukar in some parts of California, namely the more or less barren and wasteland sections of the State, is reported to be largely devoid of any other game birds. Chukars have nested on the Mohave Desert. One nest of eggs was hatched even in the middle of August in King's Canyon, concerning which the superintendent of the State game farm says: "If there is any hotter, dryer place on the face of the earth in the month of August than this area, we do not know where it is". In places in Missouri where chukars and quail were observed together, no competition was noticeable. In two cases quail and chukars were seen feeding together in an open field, but they have not been found roosting together. Missouri officials feel, however, that "if the chukars become . . . numerous, competition for food might result".

Observations of a flock of birds released in Box Elder county, Utah, in the summer of 1936 disclosed a definite inability to endure winter conditions even with a generous supplementary feeding. Pheasants were abundant in the same area and did well without feeding. With the onset of severe winter conditions the 18 surviving chukars left the field and sought food and shelter at a ranch yard. Six of them failed to live through the winter and the remainder disappeared the following summer.

No extensive study of the food habits of the chukar has been made, but in captivity these birds do well on diets fed to quail. Lespedeza, ragweed, the sorghums, and grasshoppers are definitely known to have a high place on their food list. According to some reports, corn is not relished by either captive or wild birds. Game officials of Georgia, however, report that peanuts, cracked corn, pine mast, and peas are eaten. Chukars do much scratching and turning over of debris as they feed.

The red-legged hill chukar, as the subspecies introduced into this country is sometimes called, makes its home in its native land in cultivated fields, along streams, and in barren hilly areas. It is commonly

found in the foothills of the Himalayas, and ranges even to timber line, following the snow line as the season advances. In the United States it appears so far that chukars are doing best in the drier climates of the West. It seems to take the old stubblefields, open prairies, or even deserts and other arid lands. The ultimate success of the species in this country is, of course, still in doubt, but it seems to have a chance of becoming established at least in some States west of the Mississippi River.

Hungarian Partridge

Much information has been published on the origin, introduction, distribution, life history, food habits, and sporting qualities of the Hungarian partridge. Consequently, only a summary of the data recently obtained is included here.

Our records show that more than 150,000 "Huns" have been liberated in the United States, releases having been made in all but a few of the States. Satisfactory or partial success seems to have been attained in fourteen States. (See table 2) In some published accounts as many as 270,000 of these birds are said to have been liberated in the United States.

In parts of the southern Canadian Prairie Provinces from Manitoba to British Columbia the success of the "Hun" has been phenomenal. Open seasons have been allowed on them in these Provinces for some years, in Alberta since 1913. Saskatchewan and Manitoba have daily bag limits of 15 birds, which indicates that the species must be abundant. In attempts to establish Hungarian partridges in the United States the greatest success has been attained in the Northwest and in the North Central States from Ohio to Washington. Wisconsin reports that some 31,000 "Huns" were taken during the hunting season of 1938, and increase of 16,000 over the previous year. Most of the birds found in Illinois, Montana, and Idaho are said to be the descendants of migrant stock from surrounding regions. The birds seem partial to agricultural or prairie lands. Irrigated areas in many parts of the Northwest are apparently favorable. In the more eastern States successful colonizing appears to be restricted to agricultural and grasslands. No success can be expected in heavily timbered areas or in those of excessive precipitation. Oregon officials say that the bird has done well in the high, dry parts of the State.

From a study of the stocking results, no encouragement can be given for the establishment of the Hungarian partridge in the humid Atlantic Coastal States or in the humid Southeast or the arid and hot Southwest. Most State officials feel that competition with other game species is not a problem. In Illinois and Wisconsin it is reported that the birds occur in areas heavily populated with ring-necked pheasants, yet no serious competition has been noticed. Hungarian partridges seem admirably adapted to withstand severe cold and much snow.

Where the "Hun" occurs in sporting abundance it is regarded as a fine game bird and a most delectable fowl for the table; furthermore, it has elicited few complaints from agricultural interests.

TABLE 1.--Results of Chukar Partridge Liberations in the United States

1. Birds breeding in the wild and apparently succeeding in:

California	North Dakota
Minnesota	Washington
Nebraska	Wyoming
Nevada	

2. Status uncertain in:

Alabama	New Mexico
Colorado	New Hampshire
Idaho	Oklahoma
Indiana	Oregon
Iowa	South Dakota
Illinois	Tennessee
Kansas	Texas
Maine	Utah
Massachusetts	Wisconsin
Missouri	

3. Unsuccessful in:

Georgia	Rhode Island
New Jersey	Virginia
Ohio	West Virginia
Pennsylvania	New York

4. No attempt in:

Arkansas	Maryland
Connecticut	Michigan
Delaware	North Carolina
Kentucky	Vermont
Louisiana	Mississippi

5. No information from:

Arizona	Montana
Florida	South Carolina

TABLE 2.--Results of Hungarian Partridge Liberations
In the United States and Canada

1. Birds breeding in the wild and largely successful in:

Illinois	South Dakota
Indiana	Washington
Idaho	Wisconsin
Minnesota	Alberta
Montana	British Columbia
North Dakota	Manitoba
Oregon	Saskatchewan
Ohio	

2. Birds breeding and partly successful in:

Iowa	Michigan
Nevada	Pennsylvania

3. Status uncertain in:

Kansas	Utah
New York	Wyoming
Nebraska	

4. Unsuccessful in:

Alabama	New Hampshire
California	New Jersey
Colorado	North Carolina
Connecticut	New Mexico
Florida	Oklahoma
Georgia	Rhode Island
Kentucky	South Carolina
Maryland	Tennessee
Missouri	Texas
Mississippi	Virginia
Maine	West Virginia

5. No attempt in:

Arkansas	Massachusetts
Delaware	Vermont
Louisiana	

6. No information from:

Arizona.